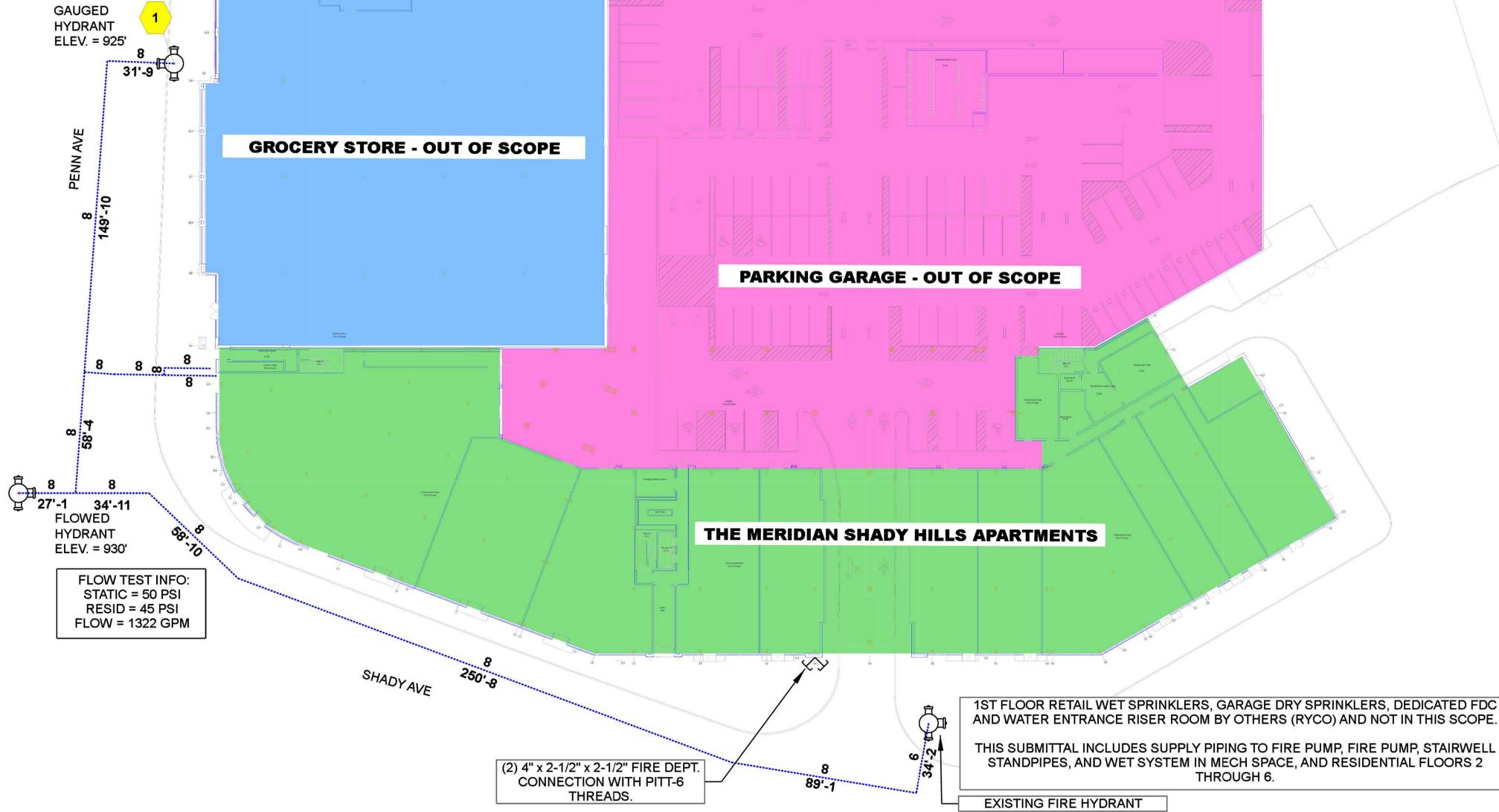




PROJECT RENDER



VICINITY MAP



SITE PLAN

SCALE: 1"=25'-0"



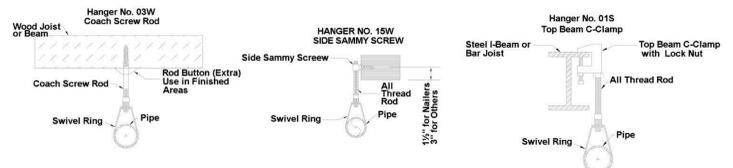
SHEET INDEX

- FP1: SITE PLAN / NOTES
- FP2: GROUND FLOOR
- FP3: GROUND FLOOR
- FP4: STANDPIPES / FIRE PUMP
- FP5: MECH SPACE SIDE A
- FP6: MECH SPACE SIDE B
- FP7: 2ND FLOOR SIDE A
- FP8: 2ND FLOOR SIDE B
- FP9: 3RD FLOOR SIDE A
- FP10: 3RD FLOOR SIDE B
- FP11: 4/5 FLOOR SIDE A
- FP12: 4/5 FLOOR SIDE B
- FP13: 6TH FLOOR SIDE A
- FP14: 6TH FLOOR SIDE B

AS STATED IN NFPA 13 (2016) SEC 8.16.6: THE DISCRETION OF THE INSTALLER, AUTOMATIC AIR VENTS ARE TO BE INSTALLED BY ONE OF THE FOLLOWING METHODS (1) MANUAL VALVE, MIN 1/2" (2) AUTOMATIC AIR VENT (3) OTHER APPROVED MEANS

HANGER DETAILS

	MAXIMUM DISTANCE BETWEEN HANGERS (FT.-IN.)									
	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"	6"	8"
STEEL PIPE EXCEPT THREADED LIGHTWALL	NA	12-0	12-0	15-0	15-0	15-0	15-0	15-0	15-0	15-0
THREADED LIGHTWALL STEEL PIPE	NA	12-0	12-0	12-0	12-0	NA	NA	NA	NA	NA
COPPER TUBE	8-0	8-0	10-0	10-0	12-0	12-0	12-0	NA	NA	NA
BLAZEMASTER CPVC	5-6	6-0	6-6	7-0	8-0	9-0	10-0	NA	NA	NA



Hydrant Flow Test Report

Test Date 8/28/2024 Test Time 7:00PM

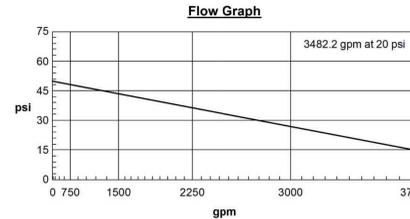
Location
Meridian
6320 Penn Ave
Pittsburgh, Pa. 15222

Tested by
PWSA / Mongioli and Son - Fire Protection

Notes
Static Hydrant - B364 - 925.00' Elevation
Residual Hydrant - B384 - 930.00' Elevation

Read Hydrant
50 psi static pressure
45 psi residual pressure
925.00 ft hydrant elevation

Outlet #	Elev	Flow Size	C	Pitot Pressure	Flow
1	930.00	2.5	.9	62	1322 gpm

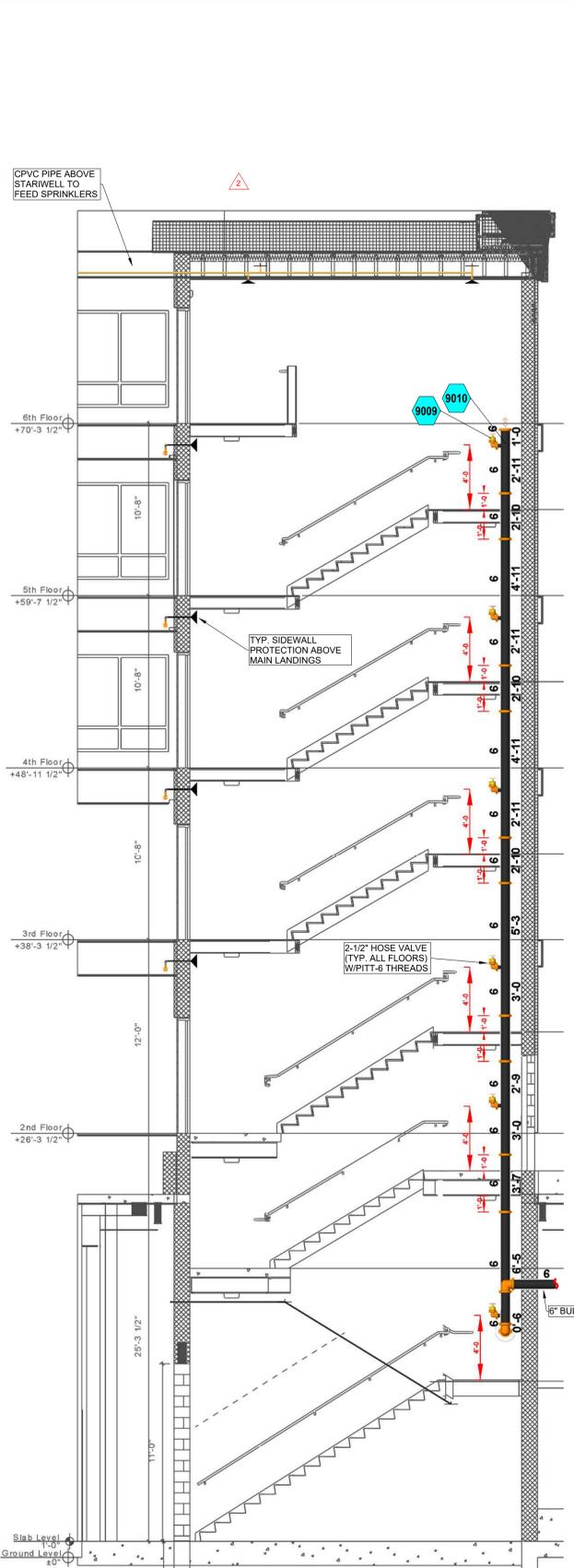


Created with the free hydrant flow test program from www.ignisinc.com

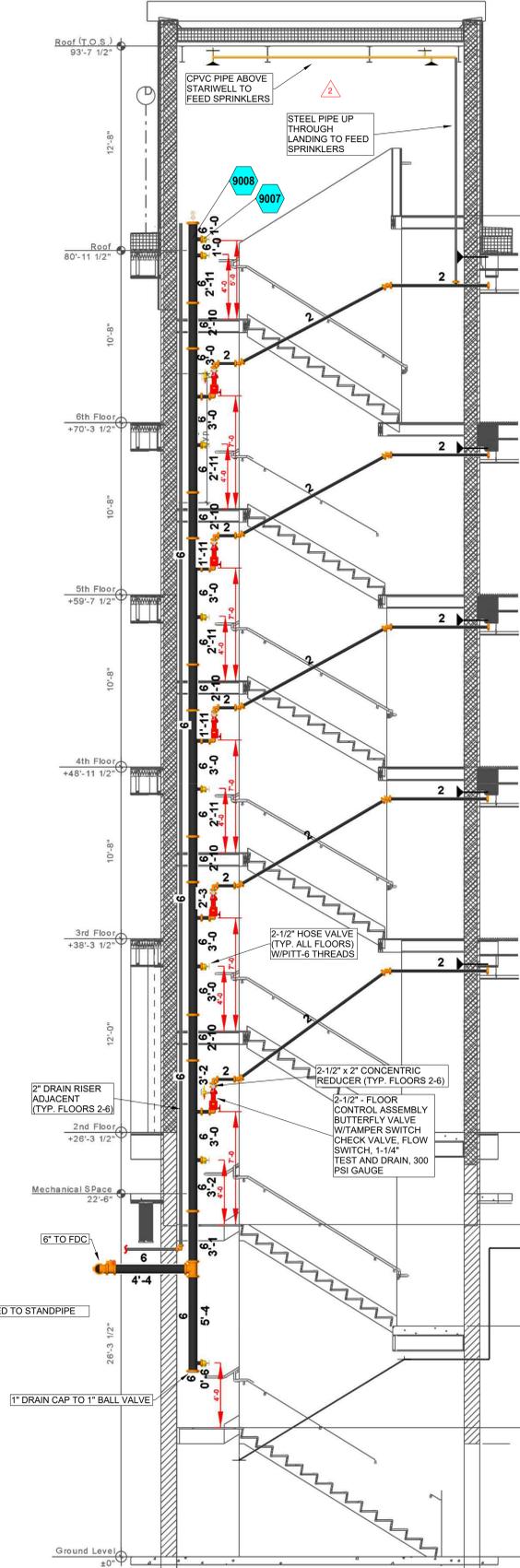
GENERAL INFORMATION

1. INTERNATIONAL BUILDING CODE (2018)
 - 1.1 OCCUPANCY: TYPE R-2 (6 LEVELS) ON A-3
 - 1.2 TYPE OF CONSTRUCTION: III-A
 - 1.3 SPRINKLER AREAS (APPROXIMATE - SEE ARCHITECTURAL PLANS FOR ACTUAL)
 - MAIN FLOOR = OUT OF SCOPE
 - SECOND FLOOR = 43,800 SQ FT
 - THIRD FLOOR - SIXTH FLOOR = 43,600 SQ FT EACH
 - 1.4 DESIGN & INSTALLATION STANDARDS: NFPA-13 (2016), NFPA-14 (2016), NFPA 20 (2016)
 - 1.5 THE BUILDING SHALL BE PROVIDED WITH A CLASS I MANUAL STANDPIPE SYSTEM IN ACCORDANCE WITH NFPA 14, 2016 EDITION. THE STANDPIPES SHALL BE LOCATED IN EACH STAIRWAY. THE 2-1/2" FIRE HOSE VALVE SHALL BE LOCATED ON STAIR LANDINGS. ALL HOSE VALVES AND FIRE DEPARTMENT CONNECTIONS TO BE PITT-6 THREADS.
2. SPRINKLER PIPE TYPES:
 - 2.1 1" STEEL PIPE TO BE SCHEDULE 40 BLACK STEEL W/ THREADED ENDS & FITTINGS
 - 2.2 1-1/2" THROUGH 6" STEEL PIPE TO BE BLK SCHEDULE 10 W/ GROOVED ENDS & FITTINGS
 - 2.3 2" AND LARGER TO USE GROOVED SHORT RADIUS FITTINGS
 - 2.6 CPVC PIPE AND FITTINGS WILL BE UTILIZED ON RESIDENTIAL FLOORS 2 THROUGH 6
3. DESIGN CRITERIA:
 - 3.1 LIGHT HAZARD AREAS INCLUDE RESIDENTIAL UNITS, RESTROOMS, AND CORRIDORS
 - 3.2 ORDINARY HAZARD GROUP I AREAS INCLUDE MECHANICAL SPACE AND ALL UTILITY AND ELECTRICAL ROOMS
 - 3.3 REMOTE AREA REDUCTIONS HAVE BEEN TAKEN WHERE APPLICABLE PER NFPA 13 SEC. 11.2.3.2.3.1
4. NOTES:
 - 4.1 ALL MATERIAL TO BE NEW AND MEET U.L. STANDARDS
 - 4.2 HANGERS TO BE INSTALLED IN ACCORDANCE WITH NFPA 13 - SEE PLAN FOR HANGING
5. SYMBOLS USED ON DRAWINGS:
 - PIPE ELEVATION ABOVE FINISH FLOOR
 - PIPE ELEVATION BELOW BOTTOM OF DECK
 - ROOM HAZARD CLASSIFICATION (ALL ROOMS ARE CONSIDERED LIGHT HAZARD U.N.O.)
 - HYDRAULIC CALCULATION JUNCTION POINT
 - CEILING HEIGHT
 - EXISTING FIRE SPRINKLER PIPE BY OTHERS
 - WET BLACK STEEL PIPE
 - GRVD. COUPLING LOCATION
6. SCOPE OF WORK:
 - 6.1 INSTALL A COMPLETE MULTIPLE ZONE WET FIRE SPRINKLER SYSTEM TO COVER ALL AREAS OF BUILDING EXCEPT AS OUTLINED BELOW AND ON SITE PLAN FOR SCOPES OF WORK BY OTHERS
 - 6.2 ALL AREAS OF THE BUILDING TO BE INSTALLED AND COVERED IN ACCORDANCE WITH THE LOCAL AUTHORITY HAVING JURISDICTION AND PER NFPA 13
 - 6.3 1ST FLOOR RETAIL WET SPRINKLERS, GARAGE DRY SPRINKLERS, DEDICATED FDC AND WATER ENTRANCE RISER ROOM BY OTHERS (RYCO) AND NOT IN THIS SCOPE.
 - 6.4 THIS SUBMITTAL INCLUDES SUPPLY PIPING TO THE FIRE PUMP, FIRE PUMP, STAIRWELL STANDPIPES, AND WET SYSTEM SPRINKLERS IN MECH SPACE, AND RESIDENTIAL FLOORS 2 THROUGH 6

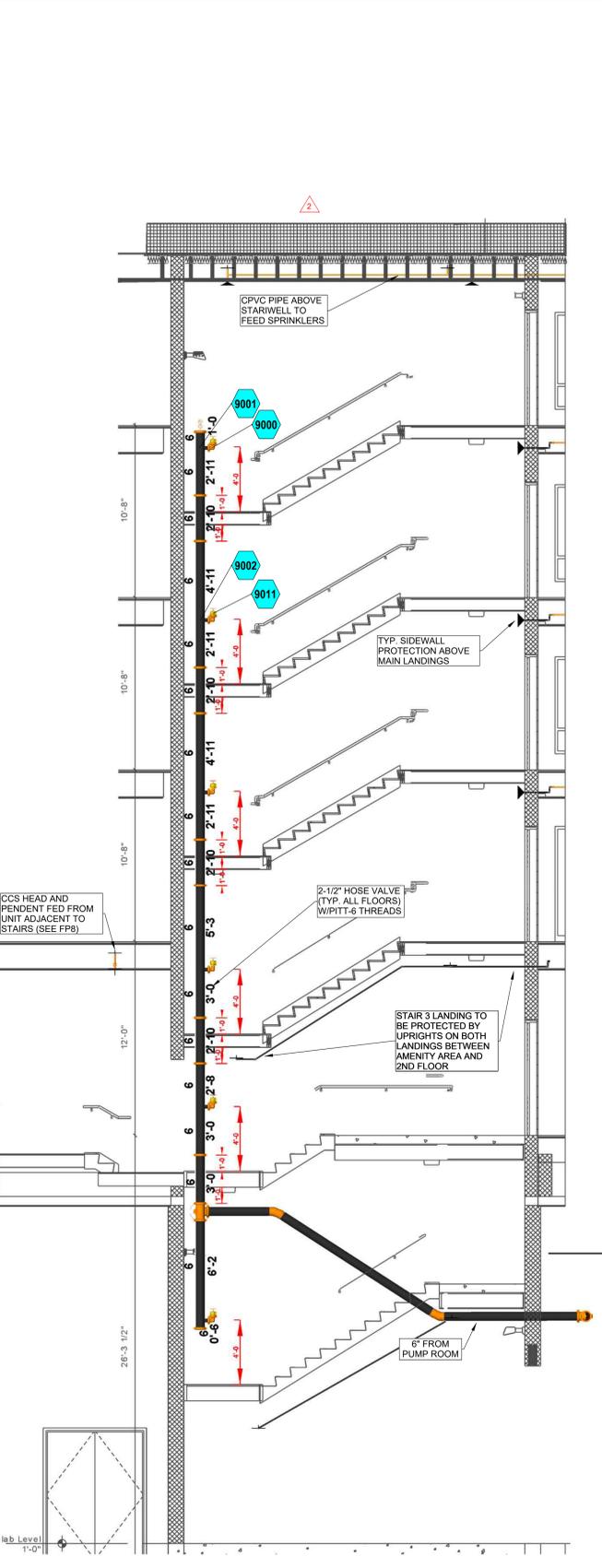
Symbol	Manufacturer	SIN	Model	Quantity	K-Factor	Type	Size	Response	Finish	Temp	Deflector Position	Sprig Length	Max Spacing
●	Reliable	RA3415	G5-56	141	5.6	Concealed Pendent	1/2"	Quick	Brass	212°F	CONCEALED	N/A	15' x 15'
○	Reliable	RA3624	KFR56	13	5.6	Upright	1/2"	Quick	Brass	212°F	N/A	SEE PLAN	15' x 15'
○	Reliable	R4862	F1FR80 QREC HSW	13	8	Horizontal Sidewall	1/2"	Quick	Chrome	175°F	6" BELOW STRUCTURE ABOVE	N/A	18' x 22'
○	Reliable	R7326	JL112	219	11.2	Upright	1/2"	Quick	Brass	212°F	DEFLECTOR AT '12	1" x 0'-6"	16' x 16'
○	Reliable	R7326	JL112	35	11.2	Upright	1/2"	Quick	Brass	212°F	DEFLECTOR AT '11	1" x 1'-2"	16' x 16'
○	Reliable	RA5231	F3RES44 DRY HSW	72	4.4	Horizontal Sidewall	1"	Fast	Chrome	175°F	6" BELOW STRUCTURE ABOVE	N/A	16' x 16'
○	Reliable	R7326	JL112	6	11.2	Upright	1/2"	Quick	Brass	212°F	DEFLECTOR AT '3	1" x 1'-3"	16' x 16'
○	Reliable	RA5332	DH80 DRY HSW EC	8	8	Horizontal Sidewall	1"	Quick	Chrome	200°F	6" BELOW STRUCTURE ABOVE	N/A	28' x 14'
○	Reliable	RA4454	KFR-COS	1145	5.6	Upright	1/2"	Fast	Brass	212°F	2" MAX. BELOW TOP CHORD	0'-9"	16' x 16'
○	Reliable	RA0616	RFC49	2006	4.9	Concealed Pendent	1/2"	Fast	Brass	212°F	CONCEALED	N/A	20' x 20'
○	Reliable	RA5994	LT56C	115	5.6	Concealed Pendent	1/2"	Quick	Brass	212°F	CONCEALED	N/A	28' x 8'
○	Reliable	RA3415	G5-56	13	5.6	Concealed Pendent	1/2"	Quick	Brass	212°F	CONCEALED	N/A	15' x 15'
○	Reliable	RA3415	G5-56	2	5.6	Concealed Pendent	1/2"	Quick	Brass	212°F	CONCEALED	N/A	15' x 15'
○	Generic			8	5.6	Conventional	1/2"	Quick	Brass	212°F	N/A - PROVIDED BY OTHERS	N/A	15' x 15'
				Total =	3796								



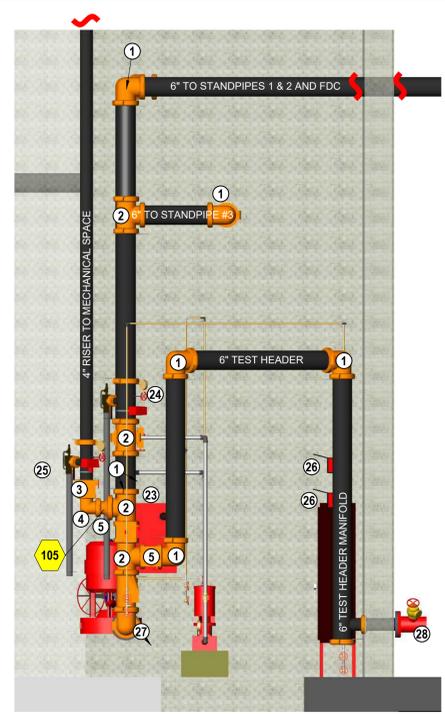
STAIR 1
SCALE: 1/4"=1'-0"



STAIR 2
SCALE: 1/4"=1'-0"

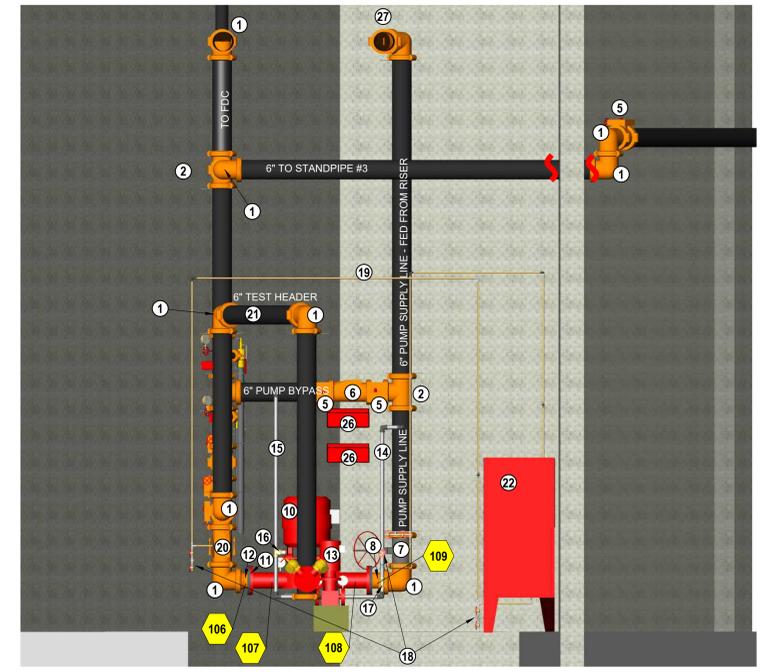


STAIR 3
SCALE: 1/4"=1'-0"

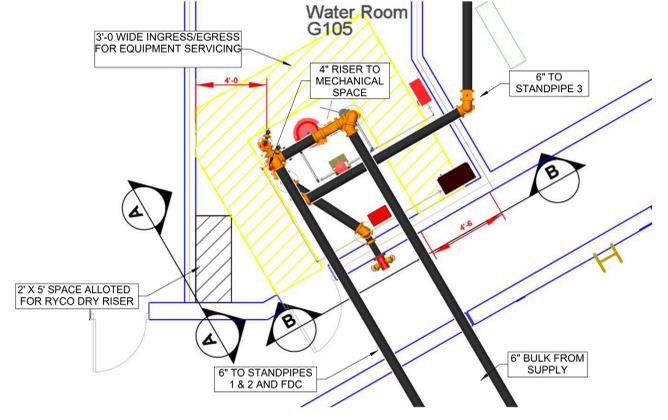


A PUMP ROOM DETAIL A
SCALE: 1/2"=1'-0"

#	DESCRIPTION
1	6" GRVD ELBOW 90
2	6" GRVD TEE
3	4" GRVD BUTTERFLY VALVE
4	4" GRVD ELBOW
5	6" GRVD BUTTERFLY VALVE
6	6" GRVD CHECK VALVE
7	6" GRVD GATE VALVE
8	6" x 5" GRVD ECC. REDUCER
9	6" GRVD x FLG.
10	PEERLESS SPVF7 FIRE PUMP: 40 Hp, 70 psi @ 500 GPM
11	5" GRVD x FLG.
12	6" x 5" GRVD CONC. INCREASER
13	PEERLESS CR 1-7-3ph JOCKEY PUMP: 0.7 Hp, 81 psi @ 6 GPM
14	1-1/4" JOCKEY PUMP SUCTION PIPING
15	1-1/4" JOCKEY PUMP DISCHARGE PIPING
16	1-1/4" OS&Y CONTROL VALVE W/ TAMPER
17	1-1/4" CHECK VALVE
18	TEST ASSEMBLY PER NFPA 20
19	JOCKEY PUMP SENSING LINE
20	6" CHECK VALVE W/ 3/32" HOLE IN CLAPPER
21	FIRE PUMP SENSING LINE
22	FIRE PUMP CONTROLLER W/ TRANSFER SWITCH
23	JOCKEY PUMP CONTROLLER
24	6" VICTAULIC UM RISER MANIFOLD
25	4" VICTAULIC UMC RISER MANIFOLD
26	SPARE HEAD CABINET
27	6" GRVD 45
28	2-WAY DERBY STYLE TEST HEADER



B PUMP ROOM DETAIL B
SCALE: 1/2"=1'-0"



ENLARGED PUMP ROOM
SCALE: 1/4"=1'-0"

PLOT DATE: 12/20/24 FILE NAME: Sps & 1st

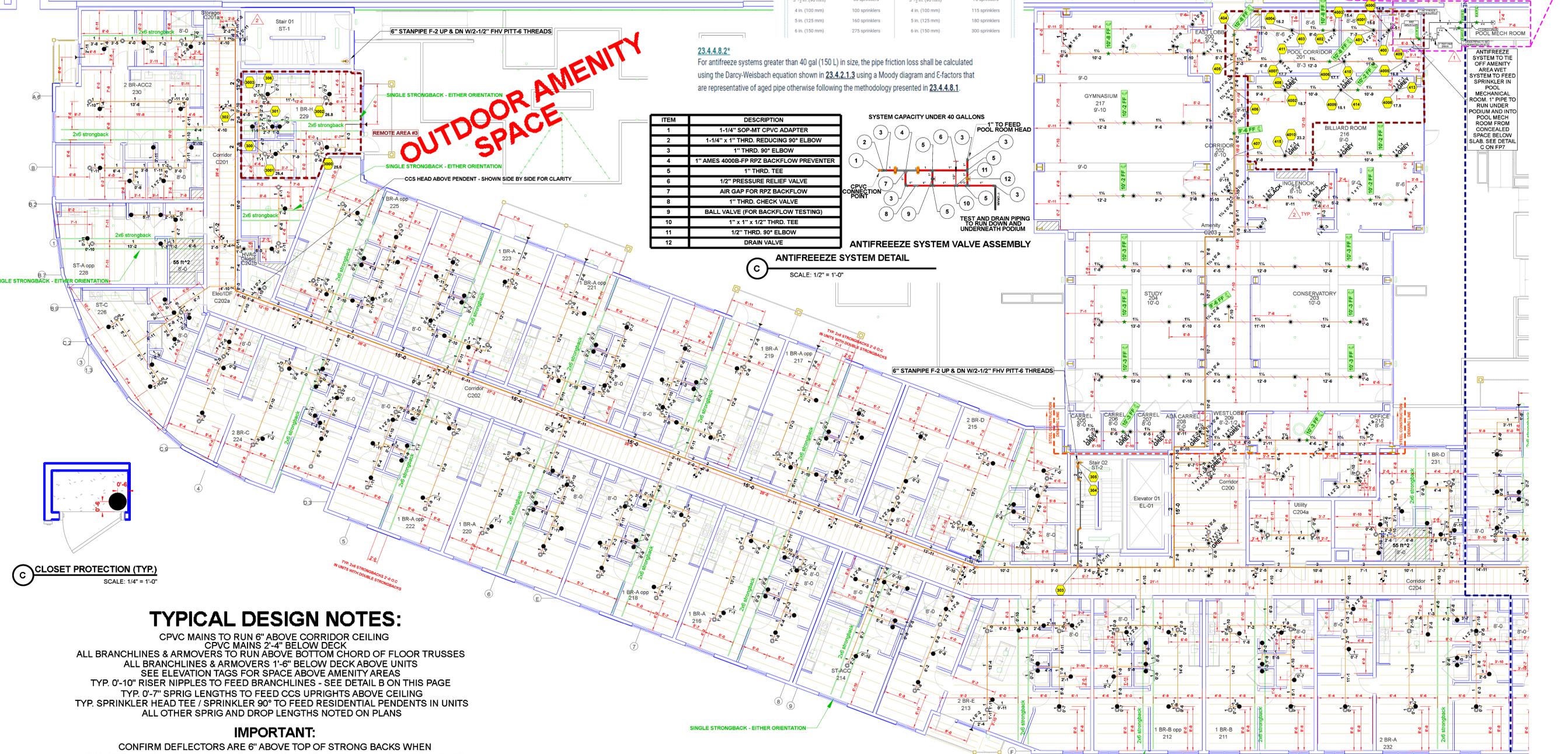
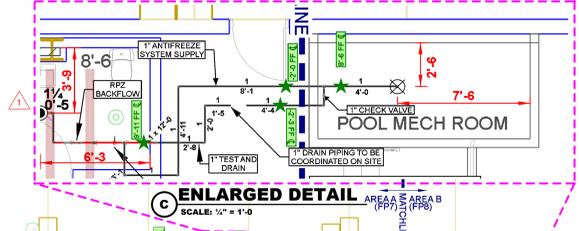
Hydraulic Information	
Remote Area 3	
OCCUPANCY CLASSIFICATION	Light Hazard
DENSITY (gpm/ft ²)	0.10 for 1500ft ² (Actual 447ft ²)
TOTAL HOSE STREAMS	100.0
DRY CAPACITY	Ogal
TOTAL HEADS FLOWING	4
K-FACTOR	5.6
TOTAL WATER REQUIRED	206.4
BASE OF RISER (gpm)	206.4
BASE OF RISER (psi)	28.5
SAFETY MARGIN (psi)	+21.4 (42.8%)

Sprinkler Legend													
Symbol	Manufacturer	SIN	Model	Quantity	K-Factor	Type	Size	Response	Finish	Temperature	Deflector Position	Sprig Length	Max Spacing
●	Reliable	RA5231	F3RES44 DRY HSW	7	4.4	Horizontal Sidewall	3/4"	Fast	Chrome	175°F	6" BELOW STRUCTURE ABOVE	N/A	16' x 16'
●	Reliable	RA4454	KFR-CCS	98	5.6	Upright	1/2"	Fast	Chrome	212°F	2" MAX. BELOW TOP CHORD	0'-6"	16' x 16'
●	Reliable	RA0616	RFC49	176	4.9	Concealed Pendant	3/4"	Fast	Brass	212°F	CONCEALED	N/A	20' x 20'
●	Reliable	RA3415	G5-56	54	5.6	Concealed Pendant	1/2"	Quick	Brass	212°F	CONCEALED	N/A	15' x 15'
●	Reliable	RA3415	G5-56	11	5.6	Concealed Pendant	1/2"	Quick	Brass	212°F	CONCEALED	N/A	15' x 15'
●	Reliable	RA5994	LT56C	11	5.6	Concealed Pendant	3/4"	Quick	Brass	212°F	CONCEALED	N/A	28' x 8"
●	Reliable	R4862	F1FR80 QREC HSW	2	4.4	Horizontal Sidewall	3/4"	Quick	Chrome	175°F	6" BELOW STRUCTURE ABOVE	N/A	18' x 22'
●	Reliable	RA3415	G5-56	2	5.6	Concealed Pendant	1/2"	Quick	Brass	212°F	CONCEALED	N/A	15' x 15'
				Total = 363									

23.7.3.4
Pipe sizes shall be in accordance with Table 23.7.3.4

Table 23.7.3.4 Ordinary Hazard Pipe Schedule			
Steel		Copper	
1 in. (25 mm)	2 sprinklers	1 in. (25 mm)	2 sprinklers
1 1/4 in. (32 mm)	3 sprinklers	1 1/4 in. (32 mm)	3 sprinklers
1 1/2 in. (40 mm)	5 sprinklers	1 1/2 in. (40 mm)	5 sprinklers
2 in. (50 mm)	10 sprinklers	2 in. (50 mm)	12 sprinklers
2 1/2 in. (65 mm)	20 sprinklers	2 1/2 in. (65 mm)	25 sprinklers
3 in. (80 mm)	40 sprinklers	3 in. (80 mm)	45 sprinklers
3 1/2 in. (90 mm)	65 sprinklers	3 1/2 in. (90 mm)	75 sprinklers
4 in. (100 mm)	100 sprinklers	4 in. (100 mm)	115 sprinklers
5 in. (125 mm)	160 sprinklers	5 in. (125 mm)	180 sprinklers
6 in. (150 mm)	275 sprinklers	6 in. (150 mm)	300 sprinklers

Hydraulic Information	
Remote Area 4	
OCCUPANCY CLASSIFICATION	Light Hazard
DENSITY (gpm/ft ²)	0.10 for 1500ft ² (Actual 913ft ²)
QUICK RESPONSE REDUCTION	10'-0" Ceiling (40.0%) 800ft ²
TOTAL HOSE STREAMS	100.0
DRY CAPACITY	Ogal
TOTAL HEADS FLOWING	11
K-FACTOR	5.6
TOTAL WATER REQUIRED	290.9
TOTAL PRESSURE REQUIRED	29.2
BASE OF RISER (psi)	29.0
BASE OF RISER (psi)	29.2
SAFETY MARGIN (psi)	+20.6 (41.3%)



OUTDOOR AMENITY SPACE

6" STANPIPE F-2 UP & DN W/2-1/2" FHV PITT-6 THREADS

SINGLE STRONGBACK - EITHER ORIENTATION

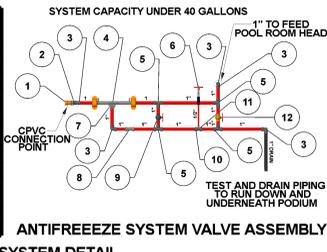
REMOTE AREA 3

SINGLE STRONGBACK - EITHER ORIENTATION

CCS HEAD ABOVE PENDENT - SHOWN SIDE BY SIDE FOR CLARITY

23.4.4.8.2
For antifreeze systems greater than 40 gal (150 L) in size, the pipe friction loss shall be calculated using the Darcy-Weisbach equation shown in 23.4.2.1.3 using a Moody diagram and C-factors that are representative of aged pipe otherwise following the methodology presented in 23.4.4.8.1

ITEM	DESCRIPTION
1	1-1/4" SOP-MT CPVC ADAPTER
2	1-1/4" x 1" THRD. REDUCING 90° ELBOW
3	1" THRD. 90° ELBOW
4	1" AMES 400B-FP RPZ BACKFLOW PREVENTER
5	1" THRD. TEE
6	1/2" PRESSURE RELIEF VALVE
7	AIR GAP FOR RPZ BACKFLOW
8	1" THRD. CHECK VALVE
9	BALL VALVE (FOR BACKFLOW TESTING)
10	1" x 1" x 1/2" THRD. TEE
11	1/2" THRD. 90° ELBOW
12	DRAIN VALVE



ANTIFREEZE SYSTEM VALVE ASSEMBLY
SCALE: 1/2" = 1'-0"

C CLOSET PROTECTION (TYP.)
SCALE: 1/4" = 1'-0"

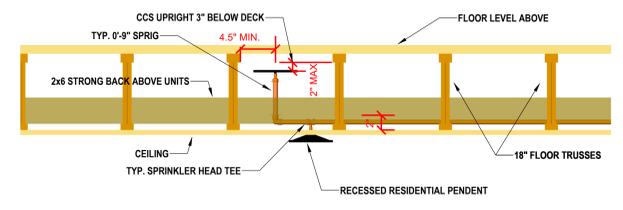
TYPICAL DESIGN NOTES:

- CPVC MAINS TO RUN 6" ABOVE CORRIDOR CEILING
- CPVC MAINS 2'-4" BELOW DECK
- ALL BRANCHLINES & ARMOVERS TO RUN ABOVE BOTTOM CHORD OF FLOOR TRUSSES
- ALL BRANCHLINES & ARMOVERS 1'-6" BELOW DECK ABOVE UNITS
- SEE ELEVATION TAGS FOR SPACE ABOVE AMENITY AREAS
- TYP. 0'-10" RISER NIPPLES TO FEED BRANCHLINES - SEE DETAIL B ON THIS PAGE
- TYP. 0'-7" SPRIG LENGTHS TO FEED CCS UPRIGHTS ABOVE CEILING
- TYP. SPRINKLER HEAD TEE / SPRINKLER 90° TO FEED RESIDENTIAL PENDENTS IN UNITS
- ALL OTHER SPRIG AND DROP LENGTHS NOTED ON PLANS

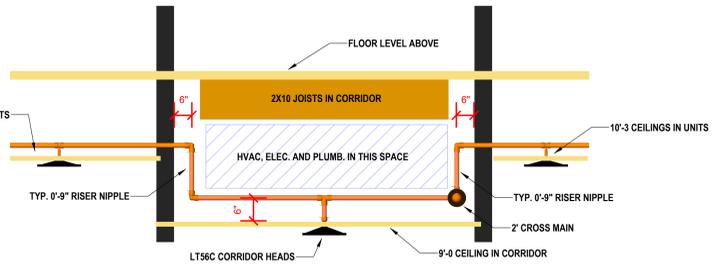
IMPORTANT:

CONFIRM DEFLECTORS ARE 6" ABOVE TOP OF STRONG BACKS WHEN CCS SPRINKLERS ARE TO COVER ENTIRE COMPARTMENT WITH ONE LINE OF HEADS

SPRINKLER LAYOUT - 2ND FLOOR SIDE A
SCALE: 1/8" = 1'-0"

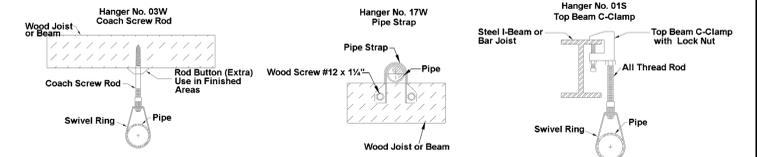


DETAIL A - TYPICAL INSTALLATION NOTES
SCALE: NTS

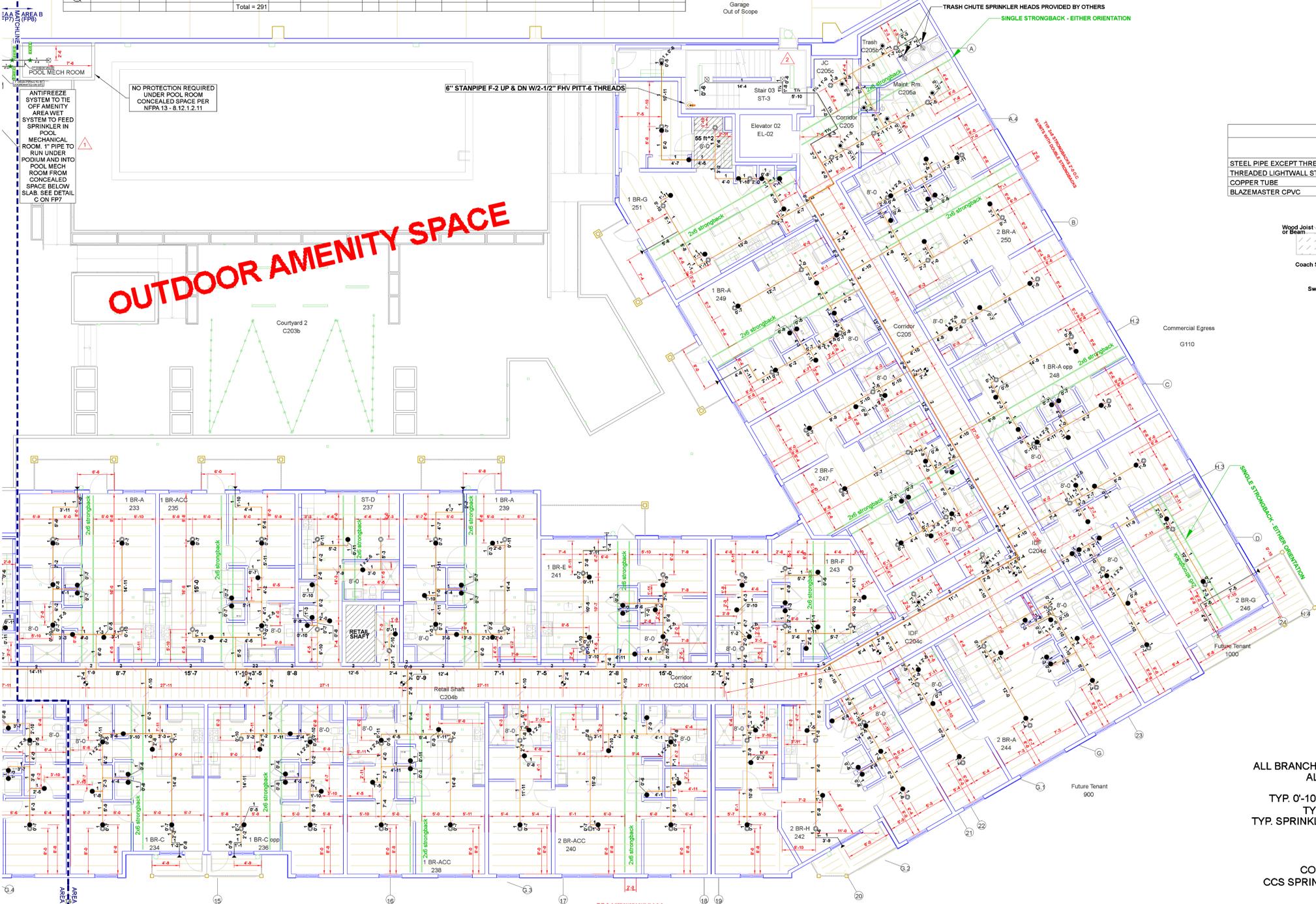


DETAIL B - CORRIDOR DESIGN AND COORDINATION
SCALE: NTS

	MAXIMUM DISTANCE BETWEEN HANGERS (FT.-IN.)									
	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"	6"	8"
STEEL PIPE EXCEPT THREADED LIGHTWALL	NA	12-0	12-0	15-0	15-0	15-0	15-0	15-0	15-0	15-0
THREADED LIGHTWALL STEEL PIPE	NA	12-0	12-0	12-0	12-0	12-0	12-0	12-0	NA	NA
COPPER TUBE	8-0	8-0	10-0	10-0	12-0	12-0	12-0	12-0	NA	NA
BLAZEMASTER CPVC	5-6	6-0	6-6	7-0	8-0	9-0	10-0	NA	NA	NA

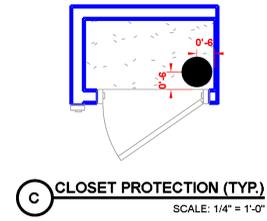
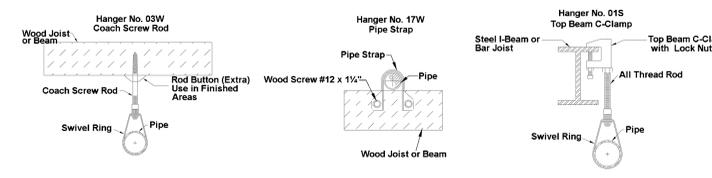


Symbol	Manufacturer	SIN	Model	Quantity	K-Factor	Type	Size	Response	Finish	Temperature	Deflector Position	Sprig Length	Max Spacing
▶	Reliable	RA5231	F3RES44 DRY HSW	9	4.4	Horizontal Sidewall	3/4"	Fast	Chrome	175°F	6" BELOW STRUCTURE ABOVE	N/A	16" x 16"
▶	Reliable	RA5532	DH80 DRY HSW EC	2	8	Horizontal Sidewall	1"	Quick	Chrome	200°F	6" BELOW STRUCTURE ABOVE	N/A	28" x 14"
●	Reliable	RA4454	KFR-CCS	96	5.6	Upright	1/2"	Fast	Brass	212°F	2" MAX. BELOW TOP CHORD	0'-6"	16" x 16"
●	Reliable	RA5994	LT56C	10	5.6	Concealed Pendant	1/2"	Quick	Brass	212°F	CONCEALED	N/A	28" x 8"
●	Reliable	RA0616	RFC49	160	4.9	Concealed Pendant	1/2"	Fast	Brass	212°F	CONCEALED	N/A	20" x 20"
●	Reliable	RA3415	G5-56	9	5.6	Concealed Pendant	1/2"	Quick	Brass	212°F	CONCEALED	N/A	15" x 15"
●	Reliable	RA3624	KFR56	3	5.6	Upright	1/2"	Quick	Brass	212°F	N/A	N/A	15" x 15"
○	Generic			2	5.6	Conventional	1/2"	Quick	Brass	212°F	N/A - PROVIDED BY OTHERS	SEE PLAN	15" x 15"
				Total = 291									



HANGER DETAILS

	MAXIMUM DISTANCE BETWEEN HANGERS (FT.-IN.)									
	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"	6"	8"
STEEL PIPE EXCEPT THREADED LIGHTWALL	NA	12-0	12-0	15-0	15-0	15-0	15-0	15-0	15-0	15-0
THREADED LIGHTWALL STEEL PIPE	NA	12-0	12-0	12-0	12-0	12-0	NA	NA	NA	NA
COPPER TUBE	8-0	8-0	10-0	10-0	12-0	12-0	12-0	NA	NA	NA
BLAZEMASTER CPVC	5-6	6-0	6-6	7-0	8-0	9-0	10-0	NA	NA	NA



TYPICAL DESIGN NOTES:

- CPVC MAINS TO RUN 6" ABOVE CORRIDOR CEILING
- CPVC MAINS 2'-4" BELOW DECK
- ALL BRANCHLINES & ARMOVERS TO RUN ABOVE BOTTOM CHORD OF FLOOR TRUSSES
- ALL BRANCHLINES & ARMOVERS 1'-6" BELOW DECK ABOVE UNITS
- SEE ELEVATION TAGS FOR SPACE ABOVE AMENITY AREAS
- TYP. 0'-10" RISER NIPPLES TO FEED BRANCHLINES - SEE DETAIL B ON THIS PAGE
- TYP. 0'-7" SPRIG LENGTHS TO FEED CCS UPRIGHTS ABOVE CEILING
- TYP. SPRINKLER HEAD TEE / SPRINKLER 90° TO FEED RESIDENTIAL PENDENTS IN UNITS
- ALL OTHER SPRIG AND DROP LENGTHS NOTED ON PLANS

IMPORTANT:

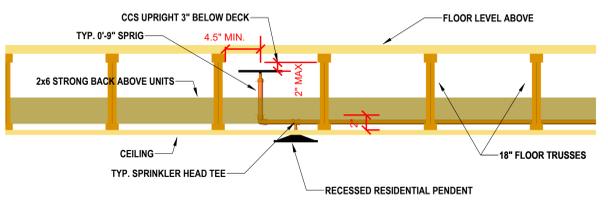
CONFIRM DEFLECTORS ARE 6" ABOVE TOP OF STRONG BACKS WHEN CCS SPRINKLERS ARE TO COVER ENTIRE COMPARTMENT WITH ONE LINE OF HEADS

SPRINKLER LAYOUT - 2ND FLOOR SIDE B

SCALE: 1/8" = 1'-0"

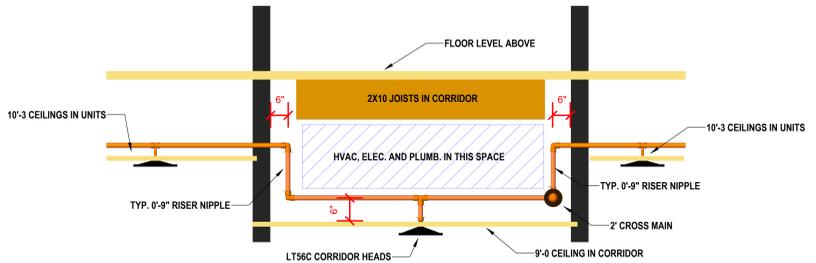
DETAIL A - TYPICAL INSTALLATION NOTES

SCALE: NTS



DETAIL B - CORRIDOR DESIGN AND COORDINATION

SCALE: NTS



PLOT DATE: 12/24/24 FILE NAME: Meridian mechanical spaces and 2nd

JOB NAME: The Meridian Shady Hills Apartments
Penn Ave and Shady Ave Pittsburgh PA, 15206

DRAWN BY: NDM
DATE: 12/24/24
JOB #: FP24-651
SHEET NO:

FP8